



## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[EPA-R08-OAR-2022-0268; EPA-HQ-OAR-2021-0663; FRL-9805-01-R8]

#### Air Plan Disapproval; Wyoming; Interstate Transport of Air Pollution for the 2015 8-hour

#### Ozone National Ambient Air Quality Standards

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** Pursuant to the Clean Air Act (CAA or the Act), the Environmental Protection Agency (EPA) is proposing to disapprove the State Implementation Plan (SIP) submittal from Wyoming regarding interstate transport for the 2015 8-hour ozone national ambient air quality standards (NAAQS). The “good neighbor” or “interstate transport” provision requires that each state’s SIP contain adequate provisions to prohibit emissions from within the state from significantly contributing to nonattainment or interfering with maintenance of the NAAQS in other states. This requirement is part of the broader set of “infrastructure” requirements, which are designed to ensure that the structural components of each state’s air quality management program are adequate to meet the state’s responsibilities under the CAA. This disapproval, if finalized, will establish a 2-year deadline for the EPA to promulgate a Federal Implementation Plan (FIP) to address the relevant interstate transport requirements, unless the EPA approves a subsequent SIP submittal that meets these requirements. Disapproval does not start a mandatory CAA sanctions clock.

**DATES:** *Comments:* Written comments must be received on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, identified as Docket No. EPA-R08-OAR-2022-0268, to the Federal eRulemaking Portal at <https://www.regulations.gov> following the online instructions for submitting comments.

*Instructions:* All submissions received must include Docket No. EPA-R08-OAR-2022-0268.

Comments received may be posted without change to <https://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, *see* the “*Public participation*” heading of the **SUPPLEMENTARY INFORMATION** section of this document. The EPA Docket Office can be contacted at (202) 566-1744, and is located at EPA Docket Center Reading Room, WJC West Building, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004. For further information on EPA Docket Center services and the current hours of operation at the EPA Docket Center, please visit us online at <https://www.epa.gov/dockets>.

**FOR FURTHER INFORMATION CONTACT:** Ellen Schmitt, Air and Radiation Division, EPA, Region 8, Mailcode 8ARD-IO, 1595 Wynkoop Street, Denver, Colorado, 80202-1129, telephone number: (303) 312-6728, email address: [schmitt.ellen@epa.gov](mailto:schmitt.ellen@epa.gov).

**SUPPLEMENTARY INFORMATION:** *Public participation:* Submit your comments, identified by Docket No. EPA-R08-OAR-2022-0268, at <https://www.regulations.gov>. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit to the EPA’s docket at <https://www.regulations.gov> any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system).

There are two dockets supporting this action, EPA-R08-OAR-2022-0268 and EPA-HQ-OAR-2021-0663. Docket No. EPA-R08-OAR-2022-0268 contains information specific to Wyoming, including the notice of proposed rulemaking. Docket No. EPA-HQ-OAR-2021-0663 contains additional modeling files, emissions inventory files, technical support documents, and

other relevant supporting documentation regarding interstate transport of emissions for the 2015 8-hour ozone NAAQS which are being used to support this action. All comments regarding information in either of these dockets are to be made in Docket No. EPA-R08-OAR-2022-0268. For additional submission methods, please contact Ellen Schmitt, telephone number: (303) 312-6728, email address: [schmitt.ellen@epa.gov](mailto:schmitt.ellen@epa.gov). For the EPA's full public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

The index for Docket No. EPA-HQ-OAR-2021-0663, is available electronically at [www.regulations.gov](http://www.regulations.gov). While all documents in the docket are listed in the index, some information may not be publicly available due to docket file size restrictions or content (e.g., CBI).

The EPA continues to carefully and continuously monitor information from the Centers for Disease Control and Prevention (CDC), local area health departments, and our federal partners so that we can respond rapidly as conditions change regarding COVID-19.

Throughout this document, “we,” “us,” and “our” means the EPA.

## **Table of Contents**

- I. Background
  - A. Description of Statutory Background
  - B. Description of the EPA's 4-Step Interstate Transport Regulatory Process
  - C. Background on the EPA's Ozone Transport Modeling Information
  - D. The EPA's Approach to Evaluating Interstate Transport SIPs for the 2015 8-hour Ozone NAAQS
- II. Wyoming SIP Submission Addressing Interstate Transport of Air Pollution for the 2015 8-hour Ozone NAAQS
- III. The EPA's Evaluation
  - A. Evaluation of Information Provided by Wyoming Regarding Step 1 and Step 2
  - B. Evaluation of Information Provided Regarding Step 3
  - C. Evaluation of Information Provided Regarding Step 4
  - D. Conclusion
- IV. Proposed Action
- V. Statutory and Executive Order Reviews

## **I. Background**

### *A. Description of Statutory Background*

On October 1, 2015, the EPA promulgated a revision to the ozone NAAQS (2015 8-hour ozone NAAQS), lowering the level of both the primary and secondary standards to 0.070 parts per million (ppm).<sup>1</sup> Section 110(a)(1) of the CAA requires states to submit, within 3 years after promulgation of a new or revised standard, SIP submissions meeting the applicable requirements of section 110(a)(2).<sup>2</sup> One of these applicable requirements is found in CAA section 110(a)(2)(D)(i)(I), otherwise known as the “interstate transport” or “good neighbor” provision, which generally requires SIPs to contain adequate provisions to prohibit in-state emissions activities from having certain adverse air quality effects on other states due to interstate transport of pollution. There are two so-called “prongs” within CAA section 110(a)(2)(D)(i)(I). A SIP for a new or revised NAAQS must contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting air pollutants in amounts that will significantly contribute to nonattainment of the NAAQS in another state (prong 1) or interfere with maintenance of the NAAQS in another state (prong 2). The EPA and states must give independent significance to prong 1 and prong 2 when evaluating downwind air quality problems under CAA section 110(a)(2)(D)(i)(I).<sup>3</sup>

#### *B. Description of the EPA’s 4-Step Interstate Transport Regulatory Process*

The EPA is using the 4-Step Interstate Transport Framework (or 4-Step Framework) to evaluate Wyoming’s SIP submittal addressing the interstate transport provision for the 2015 8-hour ozone NAAQS. The EPA has addressed the interstate transport requirements of CAA section 110(a)(2)(D)(i)(I) with respect to prior ozone NAAQS in several regional regulatory actions, including the Cross-State Air Pollution Rule (CSAPR), which addressed interstate transport with respect to the 1997 ozone NAAQS as well as the 1997 and 2006 fine particulate

---

<sup>1</sup> National Ambient Air Quality Standards for Ozone, Final Rule, 80 FR 65292 (October 26, 2015). Although the level of the standard is specified in the units of ppm, ozone concentrations are also described in parts per billion (ppb). For example, 0.070 ppm is equivalent to 70 ppb.

<sup>2</sup> SIP revisions that are intended to meet the applicable requirements of section 110(a)(1) and (2) of the CAA are often referred to as infrastructure SIPs and the applicable elements under section 110(a)(2) are referred to as infrastructure requirements.

<sup>3</sup> See *North Carolina v. EPA*, 531 F.3d 896, 909-11 (D.C. Cir. 2008).

matter standards,<sup>4</sup> and the Cross-State Air Pollution Rule Update (CSAPR Update)<sup>5</sup> and the Revised CSAPR Update, both of which addressed the 2008 ozone NAAQS.<sup>6</sup> Through the development and implementation of the CSAPR rulemakings and prior regional rulemakings pursuant to the interstate transport provision,<sup>7</sup> the EPA, working in partnership with states, developed the following 4-Step Framework to evaluate a state's obligations to eliminate interstate transport emissions under the interstate transport provision for the ozone NAAQS: (1) identify monitoring sites that are projected to have problems attaining and/or maintaining the NAAQS (i.e., nonattainment and/or maintenance receptors); (2) identify states that impact those air quality problems in other (i.e., downwind) states sufficiently such that the states are considered "linked" and therefore warrant further review and analysis; (3) identify the emissions reductions necessary (if any), applying a multifactor analysis, to eliminate each linked upwind state's significant contribution to nonattainment or interference with maintenance of the NAAQS at the locations identified in Step 1; and (4) adopt permanent and enforceable measures needed to achieve those emissions reductions.

### *C. Background on the EPA's Ozone Transport Modeling Information*

In general, the EPA has performed nationwide air quality modeling to project ozone design values which are used in combination with measured data to identify nonattainment and maintenance receptors. To quantify the contribution of emissions from specific upwind states on 2023 ozone design values for the identified downwind nonattainment and maintenance receptors, the EPA performed nationwide, state-level ozone source apportionment modeling for 2023. The

---

<sup>4</sup> See Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 FR 48208 (August 8, 2011).

<sup>5</sup> Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, 81 FR 74504 (October 26, 2016).

<sup>6</sup> In 2019, the D.C. Circuit Court of Appeals remanded the CSAPR Update to the extent it failed to require upwind states to eliminate their significant contribution by the next applicable attainment date by which downwind states must come into compliance with the NAAQS, as established under CAA section 181(a). *Wisconsin v. EPA*, 938 F.3d 303, 313 (D.C. Cir. 2019). The Revised CSAPR Update for the 2008 Ozone NAAQS, 86 FR 23054 (April 30, 2021), responded to the remand of the CSAPR Update in *Wisconsin* and the vacatur of a separate rule, the "CSAPR Close-Out," 83 FR 65878 (December 21, 2018), in *New York v. EPA*, 781 F. App'x. 4 (D.C. Cir. 2019).

<sup>7</sup> In addition to the CSAPR rulemakings, other regional rulemakings addressing ozone transport include the "NO<sub>x</sub> SIP Call," 63 FR 57356 (October 27, 1998), and the "Clean Air Interstate Rule" (CAIR), 70 FR 25162 (May 12, 2005).

source apportionment modeling provided contributions to ozone at receptors from precursor emissions of anthropogenic nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) in individual upwind states.

The EPA has released several documents containing projected ozone design values, contributions, and information relevant to evaluating interstate transport with respect to the 2015 8-hour ozone NAAQS. First, on January 6, 2017, the EPA published a notice of data availability (NODA) in which we requested comment on preliminary interstate ozone transport data including projected ozone design values and interstate contributions for 2023 using a 2011 base year platform.<sup>8</sup> In the NODA, the EPA used the year 2023 as the analytic year for this preliminary modeling because that year aligns with the expected attainment year for Moderate ozone nonattainment areas for the 2015 8-hour ozone NAAQS.<sup>9</sup> On October 27, 2017, we released a memorandum (October 2017 memorandum) containing updated modeling data for 2023, which incorporated changes made in response to comments on the NODA, and noted that the modeling may be useful for states developing SIPs to address interstate transport obligations for the 2008 ozone NAAQS.<sup>10</sup> On March 27, 2018, we issued a memorandum (March 2018 memorandum) noting that the same 2023 modeling data released in the October 2017 memorandum could also be useful for identifying potential downwind air quality problems with respect to the 2015 8-hour ozone NAAQS at Step 1 of the 4-Step Interstate Transport Framework.<sup>11</sup> The March 2018 memorandum also included the then newly available contribution modeling data for 2023 to assist states in evaluating their impact on potential downwind air

---

<sup>8</sup> See Notice of Availability of the Environmental Protection Agency's Preliminary Interstate Ozone Transport Modeling Data for the 2015 8-hour Ozone National Ambient Air Quality Standard (NAAQS), 82 FR 1733 (January 6, 2017).

<sup>9</sup> 82 FR 1733 at 1735 (January 6, 2017).

<sup>10</sup> See Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I), October 27, 2017 ("October 2017 memorandum"), available in Docket No. EPA-HQ-OAR-2021-0663.

<sup>11</sup> See Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I), March 27, 2018 ("March 2018 memorandum"), available in Docket No. EPA-HQ-OAR-2021-0663.

quality problems for the 2015 8-hour ozone NAAQS under Step 2 of the 4-Step Framework.<sup>12</sup>

The EPA subsequently issued two more memoranda in August and October 2018, providing additional information to states developing interstate transport SIP submissions for the 2015 8-hour ozone NAAQS concerning, respectively, potential contribution thresholds that may be appropriate to apply in Step 2 of the 4-Step Interstate Transport Framework, and considerations for identifying downwind areas that may have problems maintaining the NAAQS at Step 1 of the 4-Step Framework.<sup>13</sup>

Since the release of the modeling data shared in the March 2018 memorandum, the EPA performed updated modeling using a 2016-based emissions modeling platform (i.e., 2016v1). This emissions platform was developed under the EPA/Multi-Jurisdictional Organization (MJO)/state collaborative project.<sup>14</sup> This collaborative project was a multi-year joint effort by the EPA, MJOs, and states to develop a new, more recent emissions platform for use by the EPA and states in regulatory modeling as an improvement over the dated 2011-based platform that the EPA had used to project ozone design values and contribution data provided in the 2017 and 2018 memoranda. The EPA used the 2016v1 emissions to project ozone design values and contributions for 2023. On October 30, 2020, in the Notice of Proposed Rulemaking for the Revised CSAPR Update, the EPA released and accepted public comment on 2023 modeling that used the 2016v1 emissions platform.<sup>15</sup> Although the Revised CSAPR Update addressed transport for the 2008 ozone NAAQS, the projected design values and contributions from the 2016v1

---

<sup>12</sup> The March 2018 memorandum, however, provided, “While the information in this memorandum and the associated air quality analysis data could be used to inform the development of these SIPs, the information is not a final determination regarding states’ obligations under the good neighbor provision. Any such determination would be made through notice-and-comment rulemaking.”

<sup>13</sup> See Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards, August 31, 2018 (“August 2018 memorandum”), and Considerations for Identifying Maintenance Receptors for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards, October 19, 2018, available in Docket No. EPA-HQ-OAR-2021-0663.

<sup>14</sup> The results of this modeling, as well as the underlying modeling files, are included in Docket No. EPA-HQ-OAR-2021-0663.

<sup>15</sup> See 85 FR 68964, 68981.

platform are also useful for identifying downwind ozone problems and linkages with respect to the 2015 ozone NAAQS.<sup>16</sup>

Following the final Revised CSAPR Update, the EPA made further updates to the 2016 emissions platform to include mobile emissions from the EPA's Motor Vehicle Emission Simulator MOVES3 model<sup>17</sup> and updated emissions projections for electric generating units (EGUs) that reflect the emissions reductions from the Revised CSAPR Update, recent information on plant closures, and other sector trends. The construct of this updated emissions platform, 2016v2, is described in the emissions modeling technical support document (TSD) supporting this proposed rule.<sup>18</sup> The EPA performed air quality modeling of the 2016v2 emissions using the most recent public release version of the Comprehensive Air-quality Model with extensions (CAMx) photochemical modeling, version 7.10.<sup>19</sup> The EPA now proposes to primarily rely on modeling based on the updated and newly available 2016v2 emissions platform in evaluating these submissions with respect to Steps 1 and 2 of the 4-Step Framework. This modeling will generally be referenced within this action as 2016v2 modeling for 2023. By using the updated modeling results, the EPA is using the most current and technically appropriate information for this proposed rulemaking. Section III of this document and the Air Quality Modeling TSD for 2015 Ozone NAAQS Transport SIP Proposed Actions, included in Docket No. EPA-HQ-OAR-2021-0663 for this proposal, contain additional detail on the EPA's 2016v2 modeling. In this document, the EPA is accepting public comment on this updated 2023 modeling, which uses a 2016v2 emissions platform. Comments on the EPA's air quality modeling should be submitted in the Regional docket for this action, Docket No. EPA-R08-OAR-2022-0268. Comments are not being accepted in Docket No. EPA-HQ-OAR-2021-0663.

---

<sup>16</sup> See the Air Quality Modeling Technical Support Document for the Final Revised Cross-State Air Pollution Rule Update, included in the Docket No. EPA-HQ-OAR-2021-0663.

<sup>17</sup> Additional details and documentation related to the MOVES3 model can be found at <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

<sup>18</sup> See Technical Support Document (TSD) Preparation of Emissions Inventories for the 2016v2 North American Emissions Modeling Platform included in Docket No. EPA-HQ-OAR-2021-0663.

<sup>19</sup> Ramboll Environment and Health, January 2021, [www.camx.com](http://www.camx.com).



States may have chosen to rely on the results of the EPA modeling and/or alternative modeling performed by states or MJOs to evaluate downwind air quality problems and contributions as part of their submissions. In Section III we evaluate how the Wyoming Department of Environmental Quality (WDEQ) used air quality modeling information in their submission.

*D. The EPA's Approach to Evaluating Interstate Transport SIPs for the 2015 8-hour Ozone NAAQS*

The EPA proposes to apply a consistent set of policy judgments across all states for purposes of evaluating interstate transport obligations and the approvability of interstate transport SIP submissions for the 2015 8-hour ozone NAAQS. These policy judgments reflect consistency with relevant case law and past Agency practice as reflected in CSAPR and related rulemakings. Nationwide consistency in approach is particularly important in the context of interstate ozone transport, which is a regional-scale pollution problem involving many smaller contributors. Effective policy solutions to the problem of interstate ozone transport going back to the NO<sub>x</sub> SIP Call have necessitated the application of a uniform framework of policy judgments in order to ensure an “efficient and equitable” approach. *See EME Homer City Generation, LP v. EPA*, 572 U.S. 489, 519 (2014).

In the March, August, and October 2018 memoranda, the EPA recognized that states may be able to establish alternative approaches to addressing their interstate transport obligations for the 2015 8-hour ozone NAAQS that vary from a nationally uniform framework. The EPA emphasized in these memoranda, however, that such alternative approaches must be technically justified and appropriate in light of the facts and circumstances of each particular state's submittal. In general, the EPA continues to believe that deviation from a nationally consistent approach to ozone transport must be substantially justified and have a well-documented technical basis that is consistent with relevant case law. Where states submitted SIPs that rely on any such

potential “flexibilities” as may have been identified or suggested in the past, the EPA will evaluate whether the state adequately justified the technical and legal basis for doing so.

The EPA notes that certain concepts included in an attachment to the March 2018 memorandum require unique consideration, and these ideas do not constitute Agency guidance with respect to transport obligations for the 2015 ozone NAAQS. Attachment A to the March 2018 memorandum identified a “Preliminary List of Potential Flexibilities” that could potentially inform SIP development,<sup>20</sup> however, the EPA made clear in that attachment that the list of ideas were not suggestions endorsed by the Agency but rather “comments provided in various forums” on which the EPA sought “feedback from interested stakeholders.”<sup>21</sup> Further, Attachment A stated, “EPA is not at this time making any determination that the ideas discussed below are consistent with the requirements of the CAA, nor are we specifically recommending that states use these approaches.”<sup>22</sup> Attachment A to the March 2018 memorandum, therefore, does not constitute Agency guidance, but was intended to generate further discussion around potential approaches to addressing ozone transport among interested stakeholders. To the extent states sought to develop or rely on these ideas in support of their SIP submissions, the EPA will thoroughly review the technical and legal justifications for doing so.

The remainder of this section describes the EPA’s proposed framework with respect to analytic year, definition of nonattainment and maintenance receptors, selection of contribution threshold, and multifactor control strategy assessment.

## 1. Selection of Analytic Year

In general, the states and the EPA must implement the interstate transport provision in a manner “consistent with the provisions of [title I of the CAA.]” CAA section 110(a)(2)(D)(i). This requires, among other things, that these obligations are addressed consistently with the timeframes for downwind areas to meet their CAA obligations. With respect to ozone NAAQS,

---

<sup>20</sup> March 2018 memorandum, Attachment A.

<sup>21</sup> *Id.* at A-1.

<sup>22</sup> *Id.*

under CAA section 181(a), this means obligations must be addressed “as expeditiously as practicable” and no later than the schedule of attainment dates provided in CAA section 181(a)(1).<sup>23</sup> Several D.C. Circuit court decisions address the issue of the relevant analytic year for the purposes of evaluating ozone transport air-quality problems. On September 13, 2019, the D.C. Circuit issued a decision in *Wisconsin v. EPA*, remanding the CSAPR Update to the extent that it failed to require upwind states to eliminate their significant contribution by the next applicable attainment date by which downwind states must come into compliance with the NAAQS, as established under CAA section 181(a). 938 F.3d 303 at 313.

On May 19, 2020, the D.C. Circuit issued a decision in *Maryland v. EPA* that cited the *Wisconsin* decision in holding that the EPA must assess the impact of interstate transport on air quality at the next downwind attainment date, including Marginal area attainment dates, in evaluating the basis for the EPA’s denial of a petition under CAA section 126(b). *Maryland v. EPA*, 958 F.3d 1185, 1203-04 (D.C. Cir. 2020). The court noted that “section 126(b) incorporates the Good Neighbor Provision,” and, therefore, the “EPA must find a violation [of section 126] if an upwind source will significantly contribute to downwind nonattainment at the next downwind attainment deadline. Therefore, the agency must evaluate downwind air quality at that deadline, not at some later date.” *Id.* at 1204 (emphasis added). The EPA interprets the court’s holding in *Maryland* as requiring the states and the Agency, under the good neighbor provision, to assess downwind air quality as expeditiously as practicable and no later than the next applicable attainment date,<sup>24</sup> which is now the Moderate area attainment date under CAA section 181 for ozone nonattainment. The Moderate area attainment date for the 2015 8-hour

---

<sup>23</sup> For attainment dates for the 2015 8-hour ozone NAAQS, refer to CAA section 181(a), 40 CFR 51.1303, and Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards, 83 FR 25776 (June 4, 2018, effective August 3, 2018).

<sup>24</sup> We note that the court in *Maryland* did not have occasion to evaluate circumstances in which the EPA may determine that an upwind linkage to a downwind air quality problem exists at Steps 1 and 2 of the 4-Step Framework by a particular attainment date, but for reasons of impossibility or profound uncertainty the Agency is unable to mandate upwind pollution controls by that date. *See Wisconsin*, 938 F.3d at 320. The D.C. Circuit noted in *Wisconsin* that upon a sufficient showing, these circumstances may warrant flexibility in effectuating the purpose of the interstate transport provision.

ozone NAAQS is August 3, 2024.<sup>25</sup> The EPA believes that 2023 is now the appropriate year for analysis of interstate transport obligations for the 2015 8-hour ozone NAAQS, because the 2023 ozone season is the last relevant ozone season during which achieved emissions reductions in linked upwind states could assist downwind states with meeting the August 3, 2024 Moderate area attainment date for the 2015 8-hour ozone NAAQS.

The EPA recognizes that the attainment date for nonattainment areas classified as Marginal for the 2015 8-hour ozone NAAQS was August 3, 2021. Under the *Maryland* holding, any necessary emissions reductions to satisfy interstate transport obligations should have been implemented by no later than this date. At the time of the statutory deadline to submit interstate transport SIPs (October 1, 2018), many states relied upon the EPA modeling of the year 2023, and no state provided an alternative analysis using a 2021 analytic year (or the prior 2020 ozone season). However, the EPA must act on SIP submittals using the information available at the time it takes such action. In this circumstance, the EPA does not believe it would be appropriate to evaluate states' obligations under CAA section 110(a)(2)(D)(i)(I) as of an attainment date that is wholly in the past, because the Agency interprets the interstate transport provision as forward looking. *See* 86 FR 23054 at 23074; *see also Wisconsin*, 938 F.3d at 322. Consequently, in this proposal the EPA will use the analytical year of 2023 to evaluate Wyoming's CAA section 110(a)(2)(D)(i)(I) SIP submission with respect to the 2015 8-hour ozone NAAQS.

## 2. Step 1 of the 4-Step Interstate Transport Framework

In Step 1, the EPA identifies monitoring sites that are projected to have problems attaining and/or maintaining the NAAQS in the 2023 analytic year. Where the EPA's analysis shows that a site does not fall under the definition of a nonattainment or maintenance receptor, that site is excluded from further analysis under the EPA's 4-Step Framework. For sites that are

---

<sup>25</sup> *See* CAA section 181(a); 40 CFR 51.1303; Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards, 83 FR 25776 (June 4, 2018, effective August 3, 2018).

identified as a nonattainment or maintenance receptor in 2023, we proceed to the next step of our 4-Step Framework by identifying the upwind state’s contribution to those receptors.

The EPA’s approach to identifying ozone nonattainment and maintenance receptors in this action is consistent with the approach used in previous transport rulemakings. The EPA’s approach gives independent consideration to both the “contribute significantly to nonattainment” and the “interfere with maintenance” prongs of CAA section 110(a)(2)(D)(i)(I), consistent with the D.C. Circuit’s direction in *North Carolina v. EPA*.<sup>26</sup>

For the purpose of this proposal, the EPA identifies nonattainment receptors as those monitoring sites that are projected to have average design values that exceed the NAAQS and that are also measuring nonattainment based on the most recent monitored design values. This approach is consistent with prior transport rulemakings, such as the CSAPR Update, where the EPA defined nonattainment receptors as those areas that both currently measure nonattainment and that the EPA projects will be in nonattainment in the future analytic year (i.e., 2023).<sup>27</sup>

In addition, in this proposal, the EPA identifies a receptor to be a “maintenance” receptor for purposes of defining interference with maintenance, consistent with the method used in the CSAPR and upheld by the D.C. Circuit in *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 136 (D.C. Cir. 2015).<sup>28</sup> Specifically, the EPA identified maintenance receptors as those receptors that would have difficulty maintaining the relevant NAAQS in a scenario that takes into account historical variability in air quality at that receptor. The variability in air quality was determined by evaluating the “maximum” future design value at each receptor based on a projection of the maximum measured design value over the relevant base period. The EPA interprets the projected maximum future design value to be a potential future air quality outcome

---

<sup>26</sup> See *North Carolina v. EPA*, 531 F.3d 896, 910-11 (D.C. Cir. 2008) (holding that the EPA must give “independent significance” to each prong of CAA section 110(a)(2)(D)(i)(I)).

<sup>27</sup> See 81 FR 74504 (October 26, 2016). This same concept, relying on both current monitoring data and modeling to define nonattainment receptor, was also applied in CAIR. See 70 FR 25162 at 25241, 25249 (January 14, 2005); see also *North Carolina*, 531 F.3d at 913-14 (affirming as reasonable the EPA’s approach to defining nonattainment in CAIR).

<sup>28</sup> See 76 FR 48208 (August 8, 2011). The CSAPR Update and the Revised CSAPR Update also used this approach. See 81 FR 74504 (October 26, 2016) and 86 FR 23054 (April 30, 2021).

consistent with the meteorology that yielded maximum measured concentrations in the ambient data set analyzed for that receptor (i.e., ozone conducive meteorology). The EPA also recognizes that previously experienced meteorological conditions (e.g., dominant wind direction, temperatures, vertical mixing, insolation, and air mass patterns) promoting ozone formation that led to maximum concentrations in the measured data may reoccur in the future. The maximum design value gives a reasonable projection of future air quality at the receptor under a scenario in which such conditions do, in fact, reoccur. The projected maximum design value is used to identify upwind emissions that, under those circumstances, could interfere with the downwind area's ability to maintain the NAAQS.

Recognizing that nonattainment receptors are also, by definition, maintenance receptors, the EPA often uses the term “maintenance-only” to refer to those receptors that are not nonattainment receptors. Consistent with the concepts for maintenance receptors, as described above, the EPA identifies “maintenance-only” receptors as those monitoring sites that have projected average design values above the level of the applicable NAAQS, but that are not currently measuring nonattainment based on the most recent official design values. In addition, those monitoring sites with projected average design values below the NAAQS, but with projected maximum design values above the NAAQS are also identified as “maintenance only” receptors, even if they are currently measuring nonattainment based on the most recent official design values.

### 3. Step 2 of the 4-Step Interstate Transport Framework

In Step 2, the EPA quantifies the contribution of each upwind state to each receptor in the 2023 analytic year. The contribution metric used in Step 2 is defined as the average impact from each state to each receptor on the days with the highest ozone concentrations at the receptor based on the 2023 modeling. If a state's contribution value does not equal or exceed the threshold of 1 percent of the NAAQS (i.e., 0.70 ppb for the 2015 8-hour ozone NAAQS), the upwind state is not linked to a downwind air quality problem, and the EPA, therefore, concludes

that the state does not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in the downwind states. However, if a state's contribution equals or exceeds the 1 percent threshold, the state's emissions are further evaluated in Step 3, considering both air quality and cost as part of a multi-factor analysis, to determine what, if any, emissions might be deemed "significant" and, thus, must be eliminated under CAA section 110(a)(2)(D)(i)(I). The EPA is proposing to rely in the first instance on the 1 percent threshold for the purpose of evaluating a state's contribution to nonattainment or maintenance of the 2015 8-hour ozone NAAQS (i.e., 0.70 ppb) at downwind receptors. This is consistent with the Step 2 approach that the EPA applied in CSAPR for the 1997 ozone NAAQS, which has subsequently been applied in the CSAPR Update when evaluating interstate transport obligations for the 2008 ozone NAAQS. The EPA continues to find 1 percent to be an appropriate threshold. For ozone, as the EPA found in the Clean Air Interstate Rule (CAIR), CSAPR, and the CSAPR Update, a portion of the nonattainment problems from anthropogenic sources in the U.S. results from the combined impact of relatively small contributions from many upwind states, along with contributions from in-state sources and, in some cases, substantially larger contributions from a subset of particular upwind states. The EPA's analysis shows that much of the ozone transport problem being analyzed in this proposed rule is the result of the collective impacts of contributions from multiple upwind states. Therefore, application of a consistent contribution threshold is necessary to identify those upwind states that should have responsibility for addressing their contribution to the downwind nonattainment and maintenance problems to which they collectively contribute. Continuing to use 1 percent of the NAAQS as the screening metric to evaluate collective contribution from many upwind states also allows the EPA (and states) to apply a consistent framework to evaluate interstate emissions transport under the interstate transport provision from one NAAQS to the next. *See* 81 FR at 74518. *See also* 86 FR at 23085 (reviewing and explaining rationale from CSAPR, 76 FR at 48237-38, for selection of the 1 percent threshold).

The EPA's August 2018 memorandum recognized that in certain circumstances, a state may be able to establish that an alternative contribution threshold of 1 ppb is justifiable. Where a state relies on this alternative threshold, and where that state determined that it was not linked at Step 2 using the alternative threshold, the EPA will evaluate whether the state provided a technically sound assessment of the appropriateness of using this alternative threshold based on the facts and circumstances underlying its application in that particular SIP submission.

#### 4. Step 3 of the 4-Step Interstate Transport Framework

Consistent with the EPA's longstanding approach to eliminating significant contribution or interference with maintenance, at Step 3, states linked at Steps 1 and 2 are generally expected to prepare a multifactor assessment of potential emissions controls. The EPA's analysis at Step 3 in prior federal actions addressing interstate transport requirements has primarily focused on an evaluation of cost-effectiveness of potential emissions controls (on a marginal cost-per-ton basis), the total emissions reductions that may be achieved by requiring such controls (if applied across all linked upwind states), and an evaluation of the air quality impacts such emissions reductions would have on the downwind receptors to which a state is linked; other factors may potentially be relevant if adequately supported. In general, where the EPA's or alternative air quality and contribution modeling establishes that a state is linked at Steps 1 and 2, it will be insufficient at Step 3 for a state merely to point to its existing rules requiring control measures as a basis for approval. Generally, the emissions-reducing effects of all existing emissions control requirements are already reflected in the air quality results of the modeling for Steps 1 and 2. If the state is shown to still be linked to one or more downwind receptor(s), states must provide a well-documented evaluation determining whether their emissions constitute significant contribution or interference with maintenance by evaluating additional available control opportunities by preparing a multifactor assessment. While the EPA has not prescribed a particular method for this assessment, the EPA expects states at a minimum to present a sufficient technical evaluation. This would typically include information on emissions sources,



applicable control technologies, emissions reductions, costs, cost effectiveness, and downwind air quality impacts of the estimated reductions, before concluding that no additional emissions controls should be required.<sup>29</sup>

#### 5. Step 4 of the 4-Step Interstate Transport Framework

At Step 4, states (or the EPA) develop permanent and federally enforceable control strategies to achieve the emissions reductions determined to be necessary at Step 3 to eliminate significant contribution to nonattainment or interference with maintenance of the NAAQS. For a state linked at Steps 1 and 2 to rely on an emissions control measure at Step 3 to address its interstate transport obligations, that measure must be included in the state's SIP so that it is permanent and federally enforceable. *See* CAA section 110(a)(2)(D) ("Each such [SIP] shall . . . contain adequate provisions . . ."). *See also* CAA 110(a)(2)(A); *Committee for a Better Arvin v. U.S. E.P.A.*, 786 F.3d 1169, 1175-76 (9th Cir. 2015) (holding that measures relied on by state to meet CAA requirements must be included in the SIP).

## **II. Wyoming SIP Submission Addressing Interstate Transport of Air Pollution for the 2015 8-hour Ozone NAAQS**

On January 3, 2019, the WDEQ submitted a SIP revision addressing the CAA section 110(a)(2)(D)(i)(I) interstate transport requirements for the 2015 8-hour ozone NAAQS.<sup>30</sup> The SIP submission provided WDEQ's analysis of the State's impact to downwind states and concluded that emissions from Wyoming will not significantly contribute to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in other states in 2023.<sup>31</sup> The WDEQ SIP submission cited the EPA's 4-Step Framework approach, but also included a "weight-of-

---

<sup>29</sup> As examples of general approaches for how such an analysis could be conducted for their sources, states could look to the CSAPR Update, 81 FR 74504, 74539-51; CSAPR, 76 FR 48208, 48246-63; CAIR, 70 FR 25162, 25195-229; or the NO<sub>x</sub> SIP Call, 63 FR 57356, 57399-405. *See also* the Revised CSAPR Update, 86 FR 23054, 23086-23116. Consistently across these rulemakings, the EPA has developed emissions inventories, analyzed different levels of control stringency at different cost thresholds, and assessed resulting downwind air quality improvements.

<sup>30</sup> In its SIP submission, the WDEQ references its Air Quality Division (AQD). In this action, we simply reference the WDEQ. Wyoming State Implementation Plan, Interstate Transport, To Satisfy the Requirements of Clean Air Act 110(a)(2)(i)(I) for the 8-Hour Ozone NAAQS Promulgated in October 2015, December 2018. Located in the docket for this rulemaking at regulations.gov, Docket No. EPA-R08-OAR-2022-0268.

<sup>31</sup> Wyoming State Implementation Plan, Attachment B at 10.

evidence” analysis.<sup>32</sup> Throughout the submission, the WDEQ also incorporated certain outside parties’ ideas for “flexibilities” in assessing good neighbor obligations that had been listed in Attachment A to the March 2018 memorandum.<sup>33</sup> In their analysis, the WDEQ used the modeling released with the March 2018 memorandum to identify nonattainment and maintenance receptors in the Denver Metro/North Front Range nonattainment area in 2023 (Step 1).<sup>34</sup> The WDEQ also relied on the EPA’s modeling from the March 2018 memorandum to identify contributions to projected nonattainment and/or maintenance receptors and emissions from sources in the State in 2023 (Step 2).<sup>35</sup> The WDEQ identified five nonattainment and maintenance receptors to which the State was projected to contribute equal to and greater than 0.70 ppb (1 percent of the 2015 ozone NAAQS).<sup>36</sup> Table 1 provides information on the five nonattainment and maintenance receptors identified by the WDEQ in the State’s SIP submittal.

**Table 1: 2023 Average and Maximum Design Values at Downwind Receptors with Wyoming Contributions Equal to and Greater than 0.70 ppb<sup>a</sup>**

Site ID	County	State	Average Design Value (ppb)	Maximum Design Value (ppb)	Wyoming Modeled Contribution (ppb)
80050002	Arapahoe	CO	69.3	71.3	1.04
80350004	Douglas	CO	71.1	73.2	1.00
80590006	Jefferson	CO	71.3	73.7	0.81
80590011	Jefferson	CO	70.9	73.9	1.03
80690011	Larimer	CO	71.2	73.0	0.88

<sup>a</sup> Data according to March 2018 memorandum modeling.

While the WDEQ presented all of the monitors that the modeling projected Wyoming would contribute equal to and greater than the 1 percent threshold, the WDEQ indicated that they supported and applied the use of different thresholds, such as the 1 ppb limit that was established as part of the Significant Impact Level (SIL) for ozone, used in the Prevention of Significant Deterioration (PSD) permitting program. The WDEQ referenced the EPA’s August 31, 2018

<sup>32</sup> See generally id. at 3-10.

<sup>33</sup> Id. at 3, 8.

<sup>34</sup> Id. at 3. The EPA notes that the modeling released with the October 2017 and March 2018 memoranda both used 2011 base year inventory data.

<sup>35</sup> Id. at 6.

<sup>36</sup> Id.

memorandum, which the State interpreted as the EPA approving 1 ppb as an alternative to the 1 percent of the NAAQS screening threshold at Step 2.<sup>37</sup> The WDEQ noted that by using a 1 ppb threshold, the State is only linked to three<sup>38</sup> of the five receptors listed in Table 1.

Although the WDEQ's use of a 1 ppb threshold eliminated only two of the five receptor linkages, they relied on a weight-of-evidence approach at Step 2 of the 4-Step Framework to assert that Wyoming does not contribute to nonattainment or interfere with maintenance in another state (i.e., at none of the five receptors to which Wyoming's sources contribute greater than 1 percent of the NAAQS in the EPA's 2011-based modeling).<sup>39</sup> The WDEQ stated that the weight-of-evidence approach to evaluating transport in western states is appropriate, since the EPA recognized in the CSAPR Update that it was not appropriate to extend CSAPR to western states without first considering important regional differences such as topography, prevalence of wildfires, altitude, and other factors.<sup>40</sup> The WDEQ referenced the EPA's past actions on California's and Arizona's 2008 ozone interstate transport SIPs as examples of the EPA relying on a weight-of-evidence approach to support approval of the SIP for western states with contributions greater than 1 percent of the NAAQS to a downwind receptor.<sup>41</sup>

In their weight-of-evidence argument, the WDEQ considered the EPA's approval of Arizona's interstate transport SIP for the 2008 ozone NAAQS, in which the total contributions from all states that contributed to the same receptor(s) were factored into the EPA's analysis.<sup>42</sup> The WDEQ stated that for Arizona's 2008 ozone transport approval action, the EPA "concluded that upwind state contribution to the receptors Arizona was linked to were negligible, 'particularly when compared to the relatively large contributions from upwind states in the East.'"<sup>43</sup>

---

<sup>37</sup> *Id.* at 6.

<sup>38</sup> Site ID 80050002 (Arapahoe), Site ID 80350004 (Douglas), and Site ID 80590011 (Jefferson). *Id.*

<sup>39</sup> *Id.* at 3, 8-9.

<sup>40</sup> *Id.* at 2.

<sup>41</sup> *Id.* at 2-3, 6.

<sup>42</sup> See "Partial Approval and Partial Disapproval of Air Quality State Implementation Plans; Arizona; Infrastructure Requirements to Address Interstate Transport for the 2008 Ozone NAAQS," 81 FR 31513 (May 19, 2016).

<sup>43</sup> Wyoming State Implementation Plan, Attachment B at 6 (citing 81 FR 15203).

Additionally, the WDEQ asserted that the EPA's modeling results in the March 2018 memorandum illustrates a disparity between upwind contributions from states in the East versus the West.<sup>44</sup> The WDEQ stated that the modeling showed that upwind contributions for one site in Connecticut (Site ID 90019003) was 44.24 ppb, 12 times as much as the in-state contributions of 3.71 ppb.<sup>45</sup> The WDEQ compared this to the relative contribution levels at the Colorado receptors previously noted in Table 1. The WDEQ indicated that the highest collective contributions from upwind states to these receptors was 7.06 ppb to site 80590006 (one of the Jefferson County receptors) and that the in-state (Colorado) contribution to the same receptor is 25.52 ppb. Table 2 of this document provides the WDEQ's summary of in-state and upwind state contributions using the EPA's 2023 (2011 platform) modeling. The WDEQ stated in their SIP submission that the total contributions from upwind states to downwind receptors is much higher for eastern states than for western states and therefore the 1 percent threshold needs to be reevaluated for application in western states.<sup>46</sup>

The WDEQ concluded that the total collective contribution from upwind states to the Colorado receptors (including the Arapahoe, Douglas, and one Jefferson County receptor (Site ID 80590011)) is "negligible."<sup>47</sup> For the other Jefferson County receptor (Site ID 80580006) and the Larimer County receptor (the two receptors to which the WDEQ identified that Wyoming contributes above 1 percent of the NAAQs but below 1 ppb), the WDEQ did not include this argument regarding negligible collective contribution, but reiterated that their sources' contributions to this receptor are below 1 ppb, and therefore do not contribute significantly.<sup>48</sup> Citing a potential flexibility from Attachment A to the March 2018 memorandum, the WDEQ also pointed to international and non-anthropogenic emissions contributions as additional support for concluding that it is unnecessary to reach a Step 3 analysis for Wyoming, since contributions

---

<sup>44</sup> Id. at 6.

<sup>45</sup> Id.

<sup>46</sup> Id. at 7.

<sup>47</sup> Id. at 7-8.

<sup>48</sup> Id. at 8.

from these categories make up over 50 percent of the total maximum design values at each of the five receptors under evaluation.<sup>49</sup>

**Table 2: In-State vs. Collective Upwind State Contributions<sup>a</sup>**

Site	County	State	Average Design Value (ppb)	Maximum Design Value (ppb)	In-State Contribution (ppb)	Total Contribution from Upwind States (ppb)
80050002	Arapahoe	CO	69.3	71.3	22.94	5.98
80350004	Douglas	CO	71.1	73.2	24.71	5.94
80590006	Jefferson	CO	71.3	73.7	25.52	7.06
80590011	Jefferson	CO	70.9	73.9	24.72	6.98
80690011	Larimer	CO	71.2	73.0	21.74	6.33

<sup>a</sup> Data according to March 2018 memorandum modeling.

The WDEQ's SIP submission also pointed to data that indicates that the "counties currently classified as nonattainment for the 2015 standards are projected to be in attainment by the year 2025."<sup>50</sup> The WDEQ acknowledged that 2025 is not an applicable attainment year for the 2015 ozone NAAQS, but wishes to include this projection as part of its weight-of-evidence analysis and to help demonstrate that a downward trend in ozone exists.<sup>51</sup> Also included in Wyoming's SIP submission is the State's projection for VOC and NO<sub>x</sub> emissions reductions, including an expected reduction of over 32,000 tons per year (tpy) of NO<sub>x</sub> between 2011 and 2023.<sup>52</sup> The WDEQ notes that at the time of its SIP submission, 21,252 tpy of those NO<sub>x</sub> reductions had yet to occur, but pointed to the Regional Haze Rule and other agreements between the EPA and Wyoming operators.<sup>53</sup> The WDEQ also noted that additional emissions reductions would be achieved through the Tier 3 Vehicle Emissions and Fuel Standards national rulemaking.<sup>54</sup> The State concluded that based on the anticipated reductions, requiring additional reductions would not be necessary.<sup>55</sup>

---

<sup>49</sup> Id. at 8-9.

<sup>50</sup> Id. at 9.

<sup>51</sup> Id.

<sup>52</sup> Id.

<sup>53</sup> Id.

<sup>54</sup> Id.

<sup>55</sup> Id.

Based on the results of its weight-of-evidence analysis at Step 2, the WDEQ's 2019 SIP submission concluded that emissions from the State are not linked to a downwind projected nonattainment or maintenance receptor and therefore do not contribute to nonattainment or interfere with the maintenance of the 2015 ozone NAAQS in any downwind state.<sup>56</sup>

### **III. The EPA's Evaluation**

The EPA is proposing to find that Wyoming's January 3, 2019, SIP submission does not meet the State's obligations with respect to prohibiting emissions that contribute significantly to nonattainment or interfere with maintenance of the 2015 8-hour ozone NAAQS in any other state. The Agency's decision to propose disapproval of Wyoming's SIP submission is based on our evaluation of the SIP using the 4-Step Framework.

#### *A. Evaluation of Information Provided by Wyoming Regarding Step 1 and Step 2*

At Step 1 and Step 2 of the 4-Step Framework, Wyoming relied on the EPA modeling released in the March 2018 memorandum to identify nonattainment and maintenance receptors and upwind state linkages to those nonattainment and maintenance receptors in 2023. In this proposal, the EPA relies on the Agency's most recently available modeling (2016v2) to identify upwind contributions and linkages to downwind air quality problems in 2023. The earlier modeling relied on by the WDEQ identified a number of nonattainment and maintenance receptor sites in 2023 as did the more recent 2016v2 2023 modeling. Thus, the EPA agrees with the WDEQ that for Step 1 under the 4-Step Interstate Transport Framework, a number of nonattainment and maintenance receptors for the 2015 ozone NAAQS were projected for 2023.

As noted in Section II, at Step 2, the WDEQ completed a weight-of-evidence analysis to conclude that it was not linked to any projected downwind receptors. The WDEQ stated that a weight-of-evidence approach at Step 2 was the most appropriate method for evaluating interstate transport obligations for western states, and that this approach was consistent with the EPA's past practice of relying on a weight-of-evidence approach in evaluating interstate transport in the

---

<sup>56</sup> Id at 9-10.

West under the 2008 ozone NAAQS. The EPA has not prescribed to states any specific methodology for developing SIP submissions, although the EPA has historically relied on the 4-Step Framework to complete its evaluation of state SIP submissions for ozone transport. Under the previous 2008 ozone NAAQS, the EPA's action on western states' interstate transport SIP submissions has been informed using EPA modeling results and has considered additional factors as appropriate. In the CSAPR Update, the EPA stated, "The EPA and western states, working together, are continuing to evaluate interstate transport obligations on a case-by-case basis. The EPA will fulfill its backstop role with respect to issuing FIPs for western states if and when that becomes necessary."<sup>57</sup> The EPA did note that there "may be" geographic factors to consider when acting on western states but did not attempt to elucidate what these were or how they may be relevant to interstate transport policy.<sup>58</sup>

The EPA did not provide, as the WDEQ SIP submission suggests, specific regional differences or a set criteria that must be considered prior to acting on western state SIPs. Further, as discussed in more detail later in this section, the EPA's proposed action on this SIP submission is entirely consistent with the reasoning it previously applied in acting on SIP submissions for western states including Arizona, Utah, and Wyoming under the 2008 ozone NAAQS. Nonetheless, we will evaluate the evidence and arguments supplied by the WDEQ to determine whether the State's conclusion, that no further controls are necessary for Wyoming to meet its obligations under CAA 110(a)(2)(D)(i)(I), is adequately supported.

The first argument the WDEQ relied on to support its conclusion was an alternative threshold at Step 2 to determine a linkage. The WDEQ noted their support of an alternative threshold to 1 percent of the NAAQS.<sup>59</sup> As noted in Section II of the preamble, the WDEQ referred to the 1 ppb limit of the ozone SIL used in the PSD permitting program and relied on the

---

<sup>57</sup> See 81 FR 74504, at 74523.

<sup>58</sup> See *id.* The EPA also noted that the western states on which it was not acting in the CSAPR Update were not thereby relieved of their statutory obligations to address interstate transport and that the analyses developed for the CSAPR Update, including air quality modeling and emissions control potential "can be useful for western states in developing SIPs." *Id.*

<sup>59</sup> Wyoming State Implementation Plan, Attachment B at 6.

August 2018 memorandum to conclude using a 1 ppb alternative contribution threshold at Step 2 is “appropriate” for Wyoming.<sup>60</sup> The WDEQ further argued that there is a “need to reevaluate the application of CSAPR and the associated 1 percent threshold in the West.”<sup>61</sup> As an initial matter, the EPA does not agree with the WDEQ’s assessment that 1 percent is not an appropriate threshold for western states. The explanation for how the 1 percent contribution threshold was originally derived is available in the 2011 CSAPR rulemaking. *See* 76 FR 48208, 48237–38. Further, in the CSAPR Update, the EPA re-analyzed the threshold for purposes of the 2008 ozone NAAQS and determined it was appropriate to continue to apply this threshold. *See* 86 FR 23054, 23085 (summarizing CSAPR and the CSAPR Update basis for use of 1 percent of the NAAQS threshold).

Further, the EPA has explained in prior actions on western states’ ozone interstate transport SIPs that a 1 percent of the NAAQS threshold may be appropriate in the West just as much as in the East. In acting on Wyoming’s interstate transport SIP submissions for the 2008 ozone NAAQS, the EPA consistently applied the 1 percent threshold, and rejected use of a higher threshold. The EPA explained that a 1 percent threshold was appropriate to apply for a Colorado receptor “because the air quality problem in that area resulted in part from the relatively small individual contribution of upwind states that collectively contribute a larger portion of the ozone contributions (9.7%), comparable to some eastern receptors . . . .” *See* 84 FR 3389, 3391 (February 12, 2019).<sup>62</sup>

In the EPA’s action on Utah’s SIP submission as to prong 2 for the 2008 ozone NAAQS, the EPA further addressed the basis for applying a 1 percent threshold at least as to Colorado

---

<sup>60</sup> *Id.* at 6.

<sup>61</sup> *Id.* at 7.

<sup>62</sup> While the EPA ultimately approved Wyoming’s transport SIP submission as proposed in the 2019 action, the approval was on the basis of a unique air quality demonstration developed by Colorado itself to establish that there would be no air quality problem in Colorado with respect to the 2008 ozone NAAQS once air quality monitoring data influenced by “atypical events” were removed (assuming 2023 was the correct analytical year). *See* 84 FR 3392-94; 84 FR 14270 (April 10, 2019) (final action; no comments received). No such basis for approval of Wyoming’s transport SIP has been developed or submitted with respect to Colorado’s ongoing air quality problems under the 2015 ozone NAAQS. Further, as presented in Table 5 in this document, at least four Colorado monitoring sites continue to have design values as of 2020 that are in excess of the 2008 ozone NAAQS, let alone the 2015 ozone NAAQS.



receptors, and rejected comments advocating for a higher threshold. 81 FR 71991, 71994-95 (October 19, 2016). As in its Wyoming actions, the EPA explained the basis for the 1 percent threshold as derived in CSAPR and the CSAPR Update rulemakings, and then explained that the same reasoning would hold true with respect to the Colorado receptors to which Utah was linked. *Id.* The EPA noted that Utah’s state agency’s advocacy for a higher contribution threshold of 2 percent of the NAAQS was not technically supported and “appears to only be justified by the conclusion that Utah would not have been linked to Denver receptors at this level.” *Id.* at 71995.

When the EPA took action on Arizona’s 2008 ozone NAAQS transport SIP submittal, it again found the 1 percent threshold appropriate to apply as to that western state. 81 FR 15200, 15202-03 (March 22, 2016). We stated that we disagreed with Arizona’s contention that it is unclear what screening threshold is significant for southwestern states when addressing interstate transport contributions. We explained that we believe contribution from an individual state equal to or above 1 percent of the NAAQS could be considered significant where the collective contribution of emissions from one or more upwind states is responsible for a considerable portion of the downwind air quality problem regardless of where the receptor is geographically located. *See id.* 15202.

As discussed in further detail later in the section, the EPA found, based on an analysis of the California monitoring sites at issue in that action, that Arizona was not contributing to downwind nonattainment or maintenance problems. But this conclusion was not reached on the basis of an alternative threshold at Step 2, which, as explained previously, the EPA did not find justified to assume for an entire region such as the southwest.<sup>63</sup>

The WDEQ also seeks to rely on the EPA’s August 2018 memorandum as a basis for using a 1 ppb threshold. However, that memorandum provided that whether use of a 1 ppb threshold is appropriate must be based on an evaluation of state-specific circumstances, and no

---

<sup>63</sup> The EPA received no comment on the Arizona 2008 ozone NAAQS interstate transport proposal and therefore finalized its approval without further analysis. 81 FR 31513 (May 19, 2016).

such evaluation was included in the WDEQ's submission. The August 2018 memorandum did not establish a rule that the application of a 1 ppb threshold to determine a linkage would always be approvable, as the WDEQ appears to assume in its SIP submission. Rather, the EPA suggested that where the percentage of upwind state emissions is comparable to the amount captured at 1 percent, it *may be* reasonable for states to use a 1 ppb contribution threshold, as an alternative to a 1 percent threshold, at Step 2 of the 4-Step Framework, for the purposes of identifying linkages to downwind receptors. This indicates that a more determinative conclusion of appropriateness would require further state-and-receptor-specific analysis.<sup>64</sup> However, the WDEQ's SIP submission does not evaluate whether the level of upwind state contribution captured at the 1 ppb threshold is sufficiently comparable to the amount captured at 1 percent at each linked receptor. The WDEQ does not include any further technical analysis to sufficiently justify use of an alternative 1 ppb threshold at the linked receptors.

The WDEQ also referred to the EPA's use of the ozone SIL in the PSD permitting program as additional justification for use of a 1 ppb threshold. The EPA's SIL guidance relates to a different provision of the CAA regarding implementation of the PSD permitting program, i.e., a program that applies in areas that have been designated attainment or unclassifiable for the NAAQS, and it is not applicable to the good neighbor provision, which requires states to eliminate significant contribution or interference with maintenance of the NAAQS at known and ongoing air quality problem areas in other states.

The analytical gaps identified previously, as well as the EPA's consistent policy of applying a 1 percent of the NAAQS threshold even in the case of western states like Wyoming

---

<sup>64</sup> The EPA provided comments on November 1, 2018, regarding the use of a 1 ppb threshold on the WDEQ's draft SIP submittal during the State's comment period. In these comments, the EPA indicated that the August 2018 memorandum suggested that, depending on the particular facts and circumstances, it may be reasonable and appropriate to use a 1 ppb threshold, and if the WDEQ wished to use a 1 ppb threshold in its SIP development, the EPA recommended Wyoming review the August 2018 memorandum and revise their arguments accordingly. The EPA's comments were included in the WDEQ's SIP submission and are also included in Docket No. EPA-R08-OAR-2022-0268.

(particularly with respect to the Colorado receptors), indicate that the use of a 1 ppb threshold for the State is not approvable.

The EPA here shares further evaluation of its experience since the issuance of the August 2018 memorandum regarding use of alternative thresholds at Step 2. This experience leads the Agency to now believe it may not be appropriate to continue to attempt to recognize alternative contribution thresholds at Step 2. The August 2018 memorandum stated that “it may be reasonable and appropriate” for states to rely on an alternative threshold of 1 ppb threshold at Step 2.<sup>65</sup> (The memorandum also indicated that any higher alternative threshold, such as 2 ppb, would likely not be appropriate.) However, the EPA also provided that “air agencies should consider whether the recommendations in this guidance are appropriate for each situation.” Following receipt and review of 49 good neighbor SIP submittals for the 2015 8-hour ozone NAAQS, the EPA’s experience has been that nearly every state that attempted to rely on a 1 ppb threshold did not provide sufficient information and analysis to support a determination that an alternative threshold was reasonable or appropriate for that state. For instance, in nearly all submittals, the states did not provide the EPA with analysis specific to their state or the receptors to which its emissions are potentially linked. In one case, the proposed approval of Iowa’s SIP submittal, the EPA expended its own resources to attempt to supplement the information submitted by the State, in order to more thoroughly evaluate the state-specific circumstances that could support approval.<sup>66</sup> It was at the EPA’s sole discretion to perform this analysis in support of the State’s submittal, and the Agency is not obligated to conduct supplemental analysis to fill the gaps whenever it believes a state’s analysis is insufficient. The Agency no longer intends to undertake supplemental analysis of SIP submittals with respect to alternative thresholds at Step 2 for purposes of the 2015 ozone NAAQS. Furthermore, the EPA’s experience since 2018 is that

---

<sup>65</sup> August 2018 memorandum at 4.

<sup>66</sup> See “Air Plan Approval; Iowa; Infrastructure State Implementation Plan Requirements for the 2015 Ozone National Ambient Air Quality Standard,” 85 FR 12232 (March 2, 2020). The Agency received adverse comment on this proposed approval and has subsequently formally withdrawn the proposed approval. 87 FR 9477 (February 22, 2022).

allowing for alternative Step 2 thresholds may be impractical or otherwise inadvisable for a number of additional policy reasons. For a regional air pollutant such as ozone, consistency in requirements and expectations across all states is essential. Based on its review of submittals to-date and after further consideration of the policy implications of attempting to recognize an alternative Step 2 threshold for certain states, the Agency now believes the attempted use of different thresholds at Step 2 with respect to the 2015 ozone NAAQS raises substantial policy consistency and practical implementation concerns.<sup>67</sup> The availability of different thresholds at Step 2 has the potential to result in inconsistent application of good neighbor obligations based solely on the strength of a state's SIP submittal at Step 2 of the 4-Step Framework. From the perspective of ensuring effective regional implementation of good neighbor obligations, the more important analysis is the evaluation of the emissions reductions needed, if any, to address a state's significant contribution after consideration of a multifactor analysis at Step 3, including a detailed evaluation that considers air quality factors and cost. Where alternative thresholds for purposes of Step 2 may be "similar" in terms of capturing the relative amount of upwind contribution (as described in the August 2018 memorandum), nonetheless, use of an alternative threshold would allow certain states to avoid further evaluation of potential emission controls while other states must proceed to a Step 3 analysis. This can create significant equity and consistency problems among states. Further, it is not clear that national ozone transport policy is best served by allowing for less stringent thresholds at Step 2. The EPA recognized in the August 2018 memorandum that there was some similarity in the amount of total upwind contribution captured (on a nationwide basis) between 1 percent and 1 ppb. However, the EPA notes that while this may be true in some sense, that is hardly a compelling basis to move to a 1 ppb threshold. Indeed, the 1 ppb threshold has the disadvantage of losing a certain amount of total

---

<sup>67</sup> We note that Congress has placed on the EPA a general obligation to ensure the requirements of the CAA are implemented consistently across states and regions. *See* CAA section 301(a)(2). Where the management and regulation of interstate pollution levels spanning many states is at stake, consistency in application of CAA requirements is paramount.

upwind contribution for further evaluation at Step 3 (e.g., roughly seven percent of total upwind state contribution was lost according to the modeling underlying the August 2018 memorandum;<sup>68</sup> in the EPA's updated modeling, the amount lost is five percent). Considering the core statutory objective of ensuring elimination of all significant contribution to nonattainment or interference of the NAAQS in other states and the broad, regional nature of the collective contribution problem with respect to ozone, there does not appear to be a compelling policy imperative in allowing some states to use a 1 ppb threshold while others rely on a 1 percent of NAAQS threshold.

Consistency with past interstate transport actions such as CSAPR, and the CSAPR Update and Revised CSAPR Update rulemakings (which used a Step 2 threshold of 1 percent of the NAAQS for two less stringent ozone NAAQS), is also important. Continuing to use a 1 percent of NAAQS approach ensures that as the NAAQS are revised and made more stringent, an appropriate increase in stringency at Step 2 occurs, so as to ensure an appropriately larger amount of total upwind-state contribution is captured for purposes of fully addressing interstate transport. *Accord* 76 FR 48237-38. Therefore, notwithstanding the August 2018 memorandum's recognition of the potential viability of alternative Step 2 thresholds, and in particular, a potentially applicable 1 ppb threshold, the EPA's experience since the issuance of that memorandum has revealed substantial programmatic and policy difficulties in attempting to implement this approach. Nonetheless, the EPA is not at this time rescinding the August 2018 memorandum. The basis for disapproval of Wyoming's SIP submission with respect to the Step 2 analysis is, in the Agency's view, warranted even under the terms of the August 2018 memorandum. The EPA invites comment on this broader discussion of issues associated with alternative thresholds at Step 2. Depending on comment and further evaluation of this issue, the EPA may determine to rescind the 2018 memorandum in the future.

---

<sup>68</sup> See August 2018 memorandum at 4.

As described in Section I of this preamble, the EPA performed air quality modeling using the 2016v2 emissions platform to project design values and contributions for 2023. These data were examined to determine if Wyoming contributes at or above the threshold of 1 percent of the 2015 8-hour ozone NAAQS (0.70 ppb) to any downwind nonattainment or maintenance receptor. As shown in Table 3, the data<sup>69</sup> indicate that in 2023, emissions from Wyoming contribute greater than 1 percent of the NAAQS to a nonattainment receptor in Douglas County, Colorado (Site ID 80350004).<sup>70</sup>

**Table 3: Wyoming Linkage Results Based on the EPA’s Updated 2023 Modeling<sup>a</sup>**

Receptor ID	Location	Nonattainment/ Maintenance	2023 Average Design Value (ppb)	2023 Maximum Design Value (ppb)	Wyoming Contribution (ppb)
80350004	Douglas County, Colorado	Nonattainment	71.7	72.3	0.81

<sup>a</sup> According to data from 2016v2 platform modeling.

Another argument the WDEQ made as part of its Step 2 weight-of-evidence evaluation was a determination that emissions from sources in Wyoming are “negligible” when compared to in-state, non-U.S., and nonanthropogenic contributions to three receptors to which it contributed greater than 1 percent of the NAAQS (using the EPA’s March 2018 memorandum modeling results). Regarding the WDEQ’s argument that contributions from Wyoming are negligible when considering total collective contributions from all upwind states to the same receptors, the EPA disagrees.

The WDEQ makes reference to the EPA’s approval of Arizona’s 2008 ozone NAAQS transport SIP as a basis for the claim that its emissions are negligible.<sup>71</sup> In that action the EPA

<sup>69</sup> Design values and contributions at individual monitoring sites nationwide are provided in the file: 2016v2\_DVs\_state\_contributions.xlsx which is included in Docket No. EPA-HQ-OAR-2021-0663.

<sup>70</sup> These modeling results are consistent with the results of a prior round of 2023 modeling using the 2016v1 emissions platform which became available to the public in the fall of 2020 in the Revised CSAPR Update, as noted in Section I of the document. That modeling showed that Wyoming had a maximum contribution equal to or greater than 0.70 ppb to at least one nonattainment or maintenance-only receptor in 2023. These modeling results are included in the file “Ozone Design Values and Contributions Revised CSAPR Update.xlsx” in Docket No. EPA-HQ-OAR-2021-0663.

<sup>71</sup> See 81 FR 15200 (March 22, 2016) (proposal); 81 FR 31513 (May 19, 2016) (final rule; no comments received).

made an assessment of the nature of certain monitoring sites in California. The EPA noted that a “factor [ . . . ] relevant to determining the nature of a projected receptor's interstate transport problem is the magnitude of ozone attributable to transport from all upwind states collectively contributing to the air quality problem.” 81 FR at 15203. The EPA observed that only one upwind state (Arizona) was linked above 1 percent of the 2008 ozone NAAQS to the two relevant monitoring sites in California, and the cumulative ozone contribution from all upwind states (including those linked and unlinked) to those sites was 2.5 percent and 4.4 percent of the total ozone concentration, respectively. The EPA determined the size of those cumulative upwind contributions was “negligible, particularly when compared to the relatively large contributions from upwind states in the East *or in certain other areas of the West.*” *Id.* (emphasis added). In the Arizona action, the EPA concluded the two California sites to which Arizona was linked should not be treated as receptors for the purposes of determining good neighbor obligations for the 2008 ozone NAAQS. *Id.*

As an initial matter, we note that this analysis is properly considered at Step 1 of the 4-Step Framework rather than at Step 2, as it is a determination of whether an interstate-pollution transport problem should be considered to exist at all, *before* reaching a determination as to which states contribute to that problem. As the EPA explained in its Arizona action, it considered the 1 percent of the NAAQS threshold appropriate to apply at Step 2. *Id.* at 15202. *See also id.* at 15203 (“EPA believes the emissions that result in transported ozone from upwind states have limited impacts on the projected air quality problems in El Centro, California and Los Angeles, California, and therefore should not be treated as receptors for purposes of determining the interstate transport obligations of upwind states.”). However, because Wyoming has presented this argument as a part of its weight-of-evidence analysis at Step 2, we present this analysis in turn here, as related to the WDEQ’s Step 2 arguments.

Turning to the substance of the WDEQ’s argument that the EPA’s Arizona action supports an approval here: the conclusions the EPA reached regarding El Centro and Los

Angeles California cannot be reached with respect to the three receptors in Colorado examined by the WDEQ,<sup>72</sup> and the EPA has consistently taken this same position across several prior actions addressing Wyoming's and Utah's interstate transport obligations, where we have concluded that the receptors in Colorado are "substantially" influenced by upwind-state emissions. *See* 82 FR 9155, 9157 (February 3, 2017). When acting on Wyoming's and Utah's 2008 ozone NAAQS interstate transport SIP submissions, the EPA's view was that "the air quality problem in [the Denver nonattainment area of Colorado] resulted in part from the relatively small individual contribution of upwind states that collectively contribute a larger portion of the ozone contributions (9.7%), comparable to some eastern receptors . . . ." *See* 84 FR 3389, 3391 (February 12, 2019). *See also* 81 FR 71991, 71994-95 (October 19, 2016); 81 FR 28807, 28810 (May 10, 2016) (Colorado receptors are impacted by interstate transport where total upwind state contribution is 11 percent of the total ozone concentration, and five states were projected to be linked).

Indeed, the EPA has specifically addressed this precise comparison between the circumstances of Arizona's approval and the nature of the receptors in Colorado. In approving Utah's interstate transport SIP as to prong 1 for the 2008 ozone NAAQS, the EPA found its analysis as to Arizona's impact on California sites did not apply to Utah's impact on Colorado's sites (which the EPA found remained to be at least maintenance receptors as to the 2008 ozone NAAQS). *See* 82 FR 9155, 9157 (February 3, 2017) ("The EPA's assessment concluded that emissions reductions from Arizona are not necessary to address interstate transport because the total collective upwind state ozone contribution to these receptors is relatively low compared to the air quality problems typically addressed by the good neighbor provision. As discussed previously, the EPA similarly evaluated collective contribution to the Douglas County, Colorado

---

<sup>72</sup> Site ID 80050002 (Arapahoe), Site ID 80350004 (Douglas), and Site ID 80590011 (Jefferson).



monitor *and finds the collective contribution of transported pollution to be substantial.*")

(emphasis added).<sup>73</sup>

The modeling data on which the WDEQ relied in its SIP submission continue to bear out these conclusions (*see* Appendix B, pages 6-8). That modeling showed contributions from more than one upwind state above 1 percent of the NAAQS at all Colorado receptors and showed total upwind contribution to be between 8 and 10 percent of the total ozone concentrations at those receptors.

The EPA acknowledges that in its most recent modeling of 2023 (using the 2016v2 platform), the degree of the interstate transport problem to Colorado is now projected to lessen somewhat compared to previous projections of 2023. However, these projected improvements are still not sufficient to draw a conclusion that Colorado is not impacted to a considerable degree by out of state emissions. The EPA's recent air quality modeling continues to show that multiple upwind states collectively contribute to projected downwind nonattainment or maintenance receptors in Colorado—specifically, California, Utah, and Wyoming all contribute above 1 percent of the NAAQS to at least one of Colorado's receptors in 2023. (In contrast, at the time EPA approved Arizona's 2008 ozone NAAQS good neighbor SIP, Arizona was the only state linked above 1 percent at the relevant California monitoring sites.) Further, our most recent modeling shows that the total upwind state contribution to ozone concentrations (from linked and unlinked states) at identified downwind air quality problems in Colorado is approximately 6 to 7 percent, as shown in Table 4. That remains higher than the 2 to 4 percent range of total upwind contribution the EPA found to be negligible with respect to the California sites analyzed in the Arizona action. Therefore, the EPA continues to find that the collective contribution of emissions

---

<sup>73</sup> As noted in that action, because Utah was found to still be linked to Colorado's *maintenance* receptors under the 2008 ozone NAAQS, the EPA's disapproval of the SIP as to prong 2 remained in place, and accordingly, there is an outstanding obligation to resolve Utah's transport obligations with respect to the 2008 ozone NAAQS. *See id.* at 9156.

from upwind states represents a significant portion of the ozone concentrations at projected nonattainment and maintenance receptors in Colorado.

**Table 4: All Upwind State Contributions to Nonattainment Receptors in Colorado<sup>a</sup>**

Site ID	State	County	2023 Avg (ppb)	2023 Max (ppb)	Contribution of All Upwind States Combined (ppb)	% Contribution of All Upwind States Combined <sup>b</sup>
80350004	Colorado	Douglas	71.7	72.3	5.17	7%
80590006	Colorado	Jefferson	72.6	73.3	4.23	6%
80590011	Colorado	Jefferson	73.8	74.4	4.34	6%

<sup>a</sup> Based on data from 2016v2 platform modeling.

<sup>b</sup> Calculated using the projected 2023 average design values for the applicable receptors.

As noted, the Agency has consistently found that the 1 percent of the NAAQS threshold is appropriate for identifying interstate transport linkages for states collectively contributing to downwind ozone nonattainment or maintenance problems because that threshold captures a high percentage of the total pollution transport affecting downwind receptors. The EPA believes contribution from an individual state equal to or above 1 percent of the NAAQS could be considered significant where the collective contribution of emissions from one or more upwind state is responsible for a considerable portion of the downwind air quality problem regardless of where the receptor is geographically located. In this case, three states contributing to those identified receptors, including Wyoming, contribute emissions greater than or equal to 1 percent of the 2015 ozone NAAQS. In addition, the total upwind state contribution to ozone levels at the Colorado receptors is on the order of 4 to 5 ppb, or 6 to 7 percent of total ozone concentration, as shown in Table 4. Given these results, and the EPA's consistent use of the 1 percent threshold, in ozone transport actions across all areas of the country (including actions related to Wyoming and Utah's interstate transport obligations with respect to these same receptors), the EPA is proposing to determine that Wyoming contributes to nonattainment and interferences with maintenance of the 2015 ozone NAAQS for the Denver, Colorado area.

The WDEQ, relying on potential "flexibilities" in Attachment A to the March 2018 memorandum, also claims that receptors in the West are predominantly impacted by local

emissions and “uncontrollable” emissions such as those from non-U.S. sources or non-anthropogenic sources, and so the State “contends that it is unnecessary to consider Step 3 in this analysis.”<sup>74</sup> As explained previously in the preamble of this document, the concepts presented in Attachment A to the March 2018 memorandum were neither guidance nor determined by the EPA to be consistent with the CAA. While in-state, non-U.S., and non-anthropogenic sources emissions may be contributing to an area’s nonattainment or maintenance status, there is nothing in the CAA to suggest that these emissions serve to absolve upwind states of their obligations to control their own emissions.

With respect to local or in-state emissions, there is no statutory basis to conclude that such emissions must be controlled first before a contributing state’s share can be controlled under CAA section 110(a)(2)(D)(i)(I). The D.C. Circuit has held on five different occasions that the timing framework for addressing interstate transport obligations must be consistent with the downwind areas’ attainment schedule. In particular, for the ozone NAAQS, the states and the EPA are to address interstate transport obligations “as expeditiously as practicable” and no later than the attainment schedule set in accordance with CAA section 181(a). *See North Carolina*, 531 F.3d at 911-13; *Wisconsin*, 938 F.3d at 313-20; *Maryland*, 958 F.3d at 1204; *New York v. EPA*, 964 F.3d 1214, 1226 (D.C. Cir. 2020); *New York v. EPA*, 781 Fed. App’x 4, 6-7 (D.C. Cir. 2019). The court in *Wisconsin* explained its reasoning in part by noting that downwind jurisdictions often may need to heavily rely on emissions reductions from upwind states in order to achieve attainment of the NAAQS, 938 F.3d at 316-17; such states would face increased regulatory burdens including the risk of bumping up to a higher nonattainment classification if attainment is not reached by the relevant deadline, *Maryland*, 958 F.3d at 1204. The statutory framework of the CAA and these cases establish clearly that states and the EPA must address interstate transport obligations in line with the attainment schedule provided in the CAA (i.e., not *after* attainment-planning measures have been taken by the downwind state) in order to timely

---

<sup>74</sup> Wyoming SIP submission, Attachment B at 3, 8.

assist downwind states in attaining and maintain the NAAQS, and this attainment schedule is “central to the regulatory scheme.” *Wisconsin*, 938 F.3d at 316 (quoting *Sierra Club v. EPA*, 294 F.3d 155, 161 (D.C. Cir. 2002)).

With respect to international and non-anthropogenic emissions contributions, the WDEQ’s reasoning is inapplicable to the requirements of CAA section 110(a)(2)(D)(i)(I). The good neighbor provision requires states and the EPA to address interstate transport of air pollution that *contributes to* a downwind states’ ability to attain and maintain NAAQS. Whether emissions from other states or other countries also contribute to the same downwind air quality issue is irrelevant in assessing whether a downwind state has an air quality problem, or whether an upwind state is significantly contributing to that problem. States are not obligated under CAA section 110(a)(2)(D)(i)(I) to reduce emissions sufficient on their own to resolve downwind receptors’ nonattainment or maintenance problems. Rather, states are obligated to eliminate their own “significant contribution” or “interference” with the ability of other states to attain or maintain the NAAQS.

Indeed, the D.C. Circuit in *Wisconsin* specifically rejected petitioner arguments suggesting that upwind states should be excused from good neighbor obligations on the basis that some other source of emissions (whether international or another upwind state) could be considered the “but-for” cause of downwind air quality problem. 938 F.3d 303 at 323-324. The court viewed petitioners’ arguments as essentially an argument “that an upwind State ‘contributes significantly’ to downwind nonattainment only when its emissions are the sole cause of downwind nonattainment.” 938 F.3d 303 at 324. The court explained that “an upwind State can ‘contribute’ to downwind nonattainment even if its emissions are not the but-for cause.” *Id.* at 324-325. *See also Catawba County v. EPA*, 571 F.3d 20, 39 (D.C. Cir. 2009) (rejecting the argument “that ‘significantly contribute’ unambiguously means ‘strictly cause’” because there is “no reason why the statute precludes EPA from determining that [an] addition of [pollutant] into the atmosphere is significant even though a nearby county's nonattainment problem would still

persist in its absence”); *Miss. Comm'n on Envtl. Quality v. EPA*, 790 F.3d 138, 163 n.12 (D.C. Cir. 2015) (observing that the argument that “there likely would have been no violation at all ... if it were not for the emissions resulting from [another source]” is “merely a rephrasing of the but-for causation rule that we rejected in *Catawba County*.”). Therefore, a state is not excused from eliminating its significant contribution on the basis that international emissions also contribute some amount of pollution to the same receptors to which the state is linked.

Further, the data supplied in Wyoming’s SIP submission tends to be self-refuting on this point. Table 3 in Appendix B to the State’s SIP submission indicates, according to the WDEQ, that “more than 50 percent” of the total ozone concentrations at the Colorado receptors are from non-anthropogenic or non-U.S. emissions sources. Assuming those numbers are correct, this means that nearly 50 percent of the ozone levels at the Colorado receptors *are* the result of anthropogenic emissions originating in the U.S. Those emissions are clearly within the authority of states and the EPA to redress and reducing some portion of those emissions can be assumed to improve air quality at the Colorado receptors. While not all of those U.S. anthropogenic emissions can be attributed to Wyoming, Wyoming’s emissions are shown by the modeling to contribute to Colorado’s air quality problem at levels sufficient to warrant evaluation of emissions control opportunities at Step 3 of the EPA’s longstanding analytical framework.

The next analysis the WDEQ included in its SIP submission is NO<sub>x</sub> and VOC emissions trends. The WDEQ points to a projected downward trend of ozone levels at monitors within the Colorado nonattainment area through 2025, as well as an observed reduction since 2011 in emissions of VOCs and NO<sub>x</sub> emissions in Wyoming through a combination of regulatory and permitting actions.<sup>75</sup> The WDEQ also pointed to an estimate provided in the State’s 2008 ozone NAAQS infrastructure SIP, which projected a decrease in NO<sub>x</sub> emissions between 2011 and 2023 of 32,985.5 tpy and a decrease of VOC emissions between 2011 and 2023 of 905.6 tpy as a

---

<sup>75</sup> Wyoming SIP submission, Attachment B at 9.

result of the Wyoming Existing Source Rule.<sup>76</sup> The EPA considers the measures the WDEQ described to be beneficial in reducing VOC and NO<sub>x</sub> emissions, and the EPA’s most recent modeling has projected that there will be a downward trend of ozone at the Denver nonattainment monitors. However, the WDEQ has not provided any analysis to demonstrate that the reductions in their State will be sufficient to eliminate its contribution above 1 percent of the NAAQS to Colorado receptors, or that those receptors will cease to exist by 2023. The WDEQ did not quantify the total anticipated reductions in NO<sub>x</sub> and VOC emissions from its permitting actions and existing regulatory requirements nor did it evaluate the impact of those reductions in downwind air quality at the Denver area receptors. In general, the air quality modeling that the EPA has conducted already accounts for “on-the-books” emissions control measures, including the expected reductions those measures achieve through 2023. Both the 2016v1 and the more current 2016v2 modeling clearly establish continued linkage from Wyoming to downwind receptors in 2023 at Steps 1 and 2, despite those emissions control efforts.

As explained previously in this document, the WDEQ’s SIP submission does not provide an adequate technical analysis demonstrating that the SIP contains adequate provisions prohibiting emissions that will significantly contribute to nonattainment or interfere with the 2015 ozone NAAQS in any other state. Moreover, Denver monitors continue to violate the 2015 ozone NAAQS and in fact many Denver monitors showed an increase in 2020 ozone design values when compared to the 2019 design values. *See* Table 5 which includes the last five years of the 3-year design values for the Denver nonattainment area monitors.

**Table 5. Ozone Design Values for Denver Nonattainment Area Monitors<sup>a</sup>**

AQS Site ID	State	County	2014-2016 Design Value (ppb)	2015-2017 Design Value (ppb)	2016-2018 Design Value (ppb)	2017-2019 Design Value (ppb)	2018-2020 Design Value (ppb)
80013001	Colorado	Adams	67	67	67	65	69
80050002	Colorado	Arapahoe			73	74	77

---

<sup>76</sup> Id.

80050006	Colorado	Arapahoe	67	67	69	69	71
80310002	Colorado	Denver	66	68	69	68	70
80350004	Colorado	Douglas	77	77	78	78	81
80590005	Colorado	Jefferson	72	75	72	71	71
80590006	Colorado	Jefferson	77	77	78	76	79
80590011	Colorado	Jefferson	80	79	79	76	80
80690007	Colorado	Larimer	69	68	70	68	70
80690011	Colorado	Larimer	75	75	77	75	75
80691004	Colorado	Larimer	70	68	69	67	67

<sup>a</sup> According to data from 2016v2 platform modeling.

As shown in Table 5, the 3-year design values for majority of the Denver monitors increased between 2019 and 2020, indicating the end of any downward trend of ground-level ozone which the WDEQ may have seen previously. Additionally, the EPA's most recent modeling continues to indicate that emissions from Wyoming are projected to contribute to one downwind nonattainment or maintenance receptors in the Denver, Colorado area through 2023.

In its January 2019 SIP submittal, the WDEQ acknowledges that receptors in the Denver, Colorado nonattainment area could be impacted by emissions from Wyoming, but despite the modeling results that indicate that, the WDEQ concludes that Wyoming is not "linked" at Step 2 and that emissions from the State do not significantly contribute to nonattainment in the Denver area.<sup>77</sup> Overall, the EPA believes that Wyoming has not adequately addressed the modeled contributions to projected downwind receptors identified by the EPA's modeling. Therefore, based on the EPA's evaluation of the information submitted by the WDEQ, and based on the EPA's most recent modeling results for 2023, the EPA proposes to find that Wyoming is linked at Steps 1 and 2 and has an obligation to assess potential emissions reductions from sources or other emissions activity at Step 3 of the 4-step framework.

### *B. Evaluation of Information Provided Regarding Step 3*

At Step 3 of the 4-Step Framework, a state's emissions are further evaluated, in light of multiple factors, including air quality and cost considerations, to determine what, if any,

---

<sup>77</sup> Id. at 10.

emissions significantly contribute to nonattainment or interfere with maintenance and, thus, must be eliminated under CAA section 110(a)(2)(D)(i)(I).

To effectively evaluate which emissions in the state should be deemed “significant” and therefore prohibited, states generally should prepare an accounting of sources and other emissions activity for relevant pollutants and assess potential, additional emissions reduction opportunities and resulting downwind air quality improvements. The EPA has consistently applied this general approach (i.e., Step 3 of the 4-Step Framework) when identifying emissions contributions that the Agency has determined to be “significant” (or interfere with maintenance) in each of its prior federal, regional ozone transport rulemakings, and this interpretation of the statute has been upheld by the Supreme Court. *See EME Homer City*, 572 U.S. 489, 519 (2014). While the EPA has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings, state implementation plans addressing the obligations in CAA section 110(a)(2)(D)(i)(I) must prohibit “any source or other type of emissions activity within the State” from emitting air pollutants which will contribute significantly to downwind air quality problems. Thus, states must complete something similar to the EPA’s analysis (or an alternative approach to defining “significance” that comports with the statute’s objectives) to determine whether and to what degree emissions from a state should be “prohibited” to eliminate emissions that will “contribute significantly to nonattainment in, or interfere with maintenance of” the NAAQS in any other state.

Wyoming did not conduct such an analysis in its SIP submission, as a result of their conclusions pursuant to Step 1 and Step 2. As explained in connection with the evaluation of the WDEQ’s Step 1 and Step 2 analyses, the EPA disagrees with those conclusions and accordingly the WDEQ should have proceeded to evaluate which emissions in the State should be deemed “significant” and therefore prohibited. We therefore propose that Wyoming was required to analyze emissions from the sources and other emissions activity from within the State to



determine whether its contributions were significant, and we propose to disapprove its SIP submission because Wyoming failed to do so.

#### *C. Evaluation of Information Provided Regarding Step 4*

Step 4 of the 4-Step Framework calls for development of permanent and federally enforceable control strategies to achieve the emissions reductions determined to be necessary at Step 3 to eliminate significant contribution to nonattainment or interference with maintenance of the NAAQS. As mentioned previously, Wyoming's SIP submission did not contain an evaluation of additional emission control opportunities (or establish that no additional controls are required), thus, no information was provided at Step 4. As a result, the EPA proposes to disapprove Wyoming's January 3, 2019 SIP submission on the separate, additional basis that the State has not developed permanent and enforceable emissions reductions necessary to meet the obligations of CAA section 110(a)(2)(D)(i)(I).

#### *D. Conclusion*

Based on the EPA's evaluation of the WDEQ's SIP submission, the Agency is proposing to find that the portion of the State's January 3, 2019 SIP submission addressing CAA section 110(a)(2)(D)(i)(I) does not meet Wyoming's interstate transport obligations, because it fails to contain the necessary provisions to eliminate emissions that will contribute significantly to nonattainment or interfere with maintenance of the 2015 8-hour ozone NAAQS in any other state.

### **IV. Proposed Action**

We are proposing to disapprove the WDEQ's SIP submission pertaining to interstate transport of air pollution which will significantly contribute to nonattainment or interfere with maintenance of the 2015 8-hour ozone NAAQS in other states. Under CAA section 110(c)(1), disapproval would establish a 2-year deadline for the EPA to promulgate a FIP for Wyoming to address the CAA section 110(a)(2)(D)(i)(I) interstate transport requirements pertaining to significant contribution to nonattainment and interference with maintenance of the 2015 8-hour

ozone NAAQS in other states, unless the EPA approves a SIP that meets these requirements. Disapproval does not start a mandatory CAA sanctions clock for Wyoming. The remaining elements of the State's January 3, 2019 submission are not addressed in this action and have been acted on in a separate rulemaking.

## **V. Statutory and Executive Order Reviews**

### *A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget for review.

### *B. Paperwork Reduction Act (PRA)*

This proposed action does not impose an information collection burden under the PRA because it does not contain any information collection activities.

### *C. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action merely proposes to disapprove a SIP submission as not meeting the CAA.

### *D. Unfunded Mandates Reform Act (UMRA)*

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or tribal governments or the private sector.

### *E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

### *F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175. This action does not apply on any Indian reservation land, any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction, or non-reservation areas of Indian country. Thus, Executive Order 13175 does not apply to this action.

*G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it merely proposes to disapprove a SIP submission as not meeting the CAA.

*H. Executive Order 13211, Actions that Significantly Affect Energy Supply, Distribution or Use*

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

*I. National Technology Transfer and Advancement Act*

This rulemaking does not involve technical standards.

*J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

The EPA believes the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations. This action merely proposes to disapprove a SIP submission as not meeting the CAA.

*K. CAA Section 307(b)(1)*

Section 307(b)(1) of the CAA governs judicial review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the D.C. Circuit: (i) when the agency action consists of “nationally applicable regulations promulgated, or final actions taken,

by the Administrator,” or (ii) when such action is locally or regionally applicable, if “such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination.” For locally or regionally applicable final actions, the CAA reserves to the EPA complete discretion whether to invoke the exception in (ii).<sup>78</sup>

If the EPA takes final action on this proposed rulemaking, the Administrator intends to exercise the complete discretion afforded to him under the CAA to make and publish a finding that the final action (to the extent a court finds the action to be locally or regionally applicable) is based on a determination of “nationwide scope or effect” within the meaning of CAA section 307(b)(1). Through this rulemaking action (in conjunction with a series of related actions on other SIP submissions for the same CAA obligations), the EPA interprets and applies section 110(a)(2)(D)(i)(I) of the CAA for the 2015 ozone NAAQS based on a common core of nationwide policy judgments and technical analysis concerning the interstate transport of pollutants throughout the continental U.S. In particular, the EPA is applying here (and in other proposed actions related to the same obligations) the same, nationally consistent 4-Step Framework for assessing good neighbor obligations for the 2015 ozone NAAQS. The EPA relies on a single set of updated, 2016-base year photochemical grid modeling results of the year 2023 as the primary basis for its assessment of air quality conditions and contributions at Steps 1 and 2 of that 4-Step Framework. Further, the EPA proposes to determine and apply a set of nationally consistent policy judgments to apply the 4-Step Framework. The EPA has selected a nationally uniform analytic year (2023) for this analysis and is applying a nationally uniform approach to nonattainment and maintenance receptors and a nationally uniform approach to contribution

---

<sup>78</sup> In deciding whether to invoke the exception by making and publishing a finding that an action is based on a determination of nationwide scope or effect, the Administrator takes into account a number of policy considerations, including his judgment balancing the benefit of obtaining the D.C. Circuit’s authoritative centralized review versus allowing development of the issue in other contexts and the best use of agency resources.

threshold analysis.<sup>79</sup> For these reasons, the Administrator intends, if this proposed action is finalized, to exercise the complete discretion afforded to him under the CAA to make and publish a finding that this action is based on one or more determinations of nationwide scope or effect for purposes of CAA section 307(b)(1).<sup>80</sup>

### **List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Ozone.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: May 16, 2022.

KC Becker,  
Regional Administrator,  
Region 8.

[FR Doc. 2022-11153 Filed: 5/23/2022 8:45 am; Publication Date: 5/24/2022]

---

<sup>79</sup> A finding of nationwide scope or effect is also appropriate for actions that cover states in multiple judicial circuits. In the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that the "nationwide scope or effect" exception applies would be appropriate for any action that has a scope or effect beyond a single judicial circuit. *See* H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03.

<sup>80</sup> The EPA may take a consolidated, single final action on all of the proposed SIP disapproval actions with respect to obligations under CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS. Should the EPA take a single final action on all such disapprovals, this action would be nationally applicable, and the EPA would also anticipate, in the alternative, making and publishing a finding that such final action is based on a determination of nationwide scope or effect.